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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,780	11/20/2003	Jean Joseph Collette	DN2003182	8395

27280 7590 12/01/2005

THE GOODYEAR TIRE & RUBBER COMPANY  
INTELLECTUAL PROPERTY DEPARTMENT 823  
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AKRON, OH 44316-0001

EXAMINER
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MAKI, STEVEN D

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/717,780

Applicant(s)

COLLETTE ET AL.

Examiner

Steven D. Maki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,4-16 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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- 1) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

- 2) Claims 1, 4-16 and 18-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claims 1 and 15, the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the new matter) is the subject matter of "at least one plane of each recess or protrusion initiates at least one plane of another protrusion or recess". There is no explicit basis for the above noted language in the original disclosure. The original disclosure shows alternating recesses and protrusions as can be seen for example in figures 1 and 2, but fails to reasonably convey "at least one plane of each recess or protrusion initiates at least one plane of another protrusion or recess". For example, the original disclosure fails to support at least one plane of each recess initiating two, three, or four planes of another recess in at least two horizontal rows of alternating recesses and protrusions. None of the original figures shows this subject matter. Another example, the original disclosure fails to support at least one plane of each protrusion initiating two three, four planes another protrusion in at least two horizontal rows of

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alternating recesses and protrusions. None of the original figures shows this subject matter. In short, the above noted language, which includes "at least" and "or", introduces subject matter of various combinations of planes, which were not contemplated by the inventor at the time the application was filed.

3) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Japan 925

5) **Claims 1, 4-6, 10, 13, 15, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Japan 925 (JP 2000-102925).**

See abstract and figure 14. In view of figure 13, one of ordinary skill in the art would readily understand that, although the mold blade of figure 14 has varying thickness, the recesses and protrusions formed by the figure 14 mold blade have constant thickness.

With respect to "at least one plane of each recess or protrusion initiates at least one plane of another protrusion or recess", Japan 925's mold blade and the sipe formed by the mold blade define protrusions and recesses wherein "at least one plane of each

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recess or protrusion initiates at least one plane of another protrusion or recess" since a protrusion and an adjacent recess of the figure 14 mold blade are defined by a common portion of the middle layer of the three layer mold blade.

**6) Claims 1, 4-6, 10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 925 in view of at least one of Japan 105 (JP 2002-356105) and Japan 923 (JP 10-80923).**

As to claims 1, 4-6, 10 and 13, it would have been obvious to one of ordinary skill in the art to form Japan 925's figure 14 mold blade for forming a sipe in a tire tread such that the protrusions and recesses have constant thickness in view of the suggestion from at least one of Japan 105 and Japan 923 to form a three dimensional sipe having recesses and protrusions of constant thickness. See figures 2(a), 2(b) of Japan 105. See figures 4, 5, 7, and 11 of Japan 923.

Lagnier 002 / Ishihara

**7) Claims 1, 4-7, 9-11, 13, 15-16 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lagnier 002 (US 5783002) or Ishihara (US 20020139164) and in view of at least one of Japan 923 and Japan 925.**

Lagnier 002 discloses a tire tread comprising elastomeric relief elements having three dimensional sipes therein wherein each sipe has at least two rows of alternating protrusions and recesses wherein "at least one plane / surface of each recess or protrusion initiates at least one plane / surface of another protrusion or recess". See for example figures 1 or 5.

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Ishihara discloses a tire tread comprising elastomeric relief elements having three dimensional sipes therein wherein each sipe has at least two rows of alternating protrusions and recesses wherein "at least one surface / plane of each recess or protrusion initiates at least one surface / plane of another protrusion or recess". See for example figures 43, 49, 7 or 9.

Hence, **three-dimensional sipes / three dimensional mold blades having at least two horizontal rows of alternating protrusions and recesses are well known in the tire tread art** as shown by either Lagnier or Ishihara.

As to claims 1 and 15, it would have been obvious to one of ordinary skill in the art to provide the well known sipe / mold blade having at least two rows of alternating protrusions and recesses with the claimed shape in view of the suggestion from at least one of Japan 923 and Japan 925 to **provide protrusions and recesses of a mold blade for a sipe with a shape comprising a planar vertex defined by a configuration such as a square or rectangle**. It is noted that Lagnier 002 teaches that the base of the protrusions and cavities (recesses) is a "quadrilateral base" and that "straight line segments" may be used to define the protrusions and cavities (col. 2 lines 24-31). It is also noted that Ishihara shows three dimensional shapes defined by curved lines and straight lines as being alternatives (figure 21, figures 49(a), 4(b)).

As to claims 1 and 16, Lagnier 002 or Ishihara suggest forming sipes having at least two horizontal rows of alternating recesses and projections wherein the protrusions and recesses have constant thickness and the mold blade has constant thickness.

As to claim 4, Lagnier 002 or Ishihara's sipe and mold blade have two horizontal rows of projections and recesses, which alternate in the axial and radial directions.

As to claims 5, 6 and 18, at least one of Japan 923 and Japan 925 suggest the claimed polygonal / quadrilateral configuration.

As to claims 9 and 10, Lagnier or Ishihara suggests recesses and protrusions with sides inclined at the same angle. Japan 923 also suggests recesses and protrusions with inclined sides.

As to claim 11, it would have been obvious to one of ordinary skill in the art to use different angles as claimed since Lagnier 002, directed to incisions (sipes) having alternating protrusions and recesses, suggests using a configuration (e.g. wavelength) which is constant or varying in the depth direction (col. 4 lines 15-35).

As to claims 5-7, 9-11 and 18, it would have been obvious to one of ordinary skill in the art to use a polygonal configuration as claimed for the alternating projections and recesses of the well known sipe / mold blade shown by Lagnier 002 or Ishihara since (1) Japan 925 and Japan 923 teach alternating projections and recesses having the same geometric shape (see alternating square projections and recesses of figure 14 of Japan 925 and truncated cone, figure 1-7 of Japan 923) and (2) Japan 923 suggests using other shapes such as rectangular (paragraph 21), rhombus (paragraph 23) or hexagon (paragraph 23). As to claim 7, it would have been obvious to use a combination of different polygon shapes since (1) Japan 925 and Japan 923 suggest using alternating polygon shapes and (2) Japan 923 teaches that different shapes may be combined (figure 12).

As to claim 13, the claimed limitation (axial width of the sipe increases to a maximum as the radial depth increases) would have been obvious since Japan 923 suggests locating the sipes in blocks wherein the sipe opens to both sidewalls of the block and the sidewalls of the block are inclined. See figure 2.

As to claim 19, the geometric configuration at the planar vertex is the same as that at the centerline.

**8) Claims 8, 12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lagnier 002 or Ishihara and in view of at least one of Japan 923 and Japan 925 as applied above and further in view of Heinen (WO 99/48707).**

As to claims 8 and 12, it would have been obvious to one of ordinary skill in the art to decrease the cross sectional area / axial extent of the projections and recesses as the radial depth increases since Heinen, also directed to sipes / mold blades having projections and recesses, suggests decreasing the size of the projections / recesses as the radial depth increases as an alternative to using constant size projections / recesses (see figure 6).

As to claim 20, it would have been obvious to one of ordinary skill in the art to use a continuous row and a discontinuous row of alternating projections and recesses in the well known three dimensional sipe in view of Heinen's teaching to vary the arrangement of projections and recesses to obtain desired stiffness variations (page 4, figure 6).

**9) Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lagnier 002 or Ishihara and in view of at least one of Japan 923 and Japan 925 as**



**applied above and further in view of in view of Maitre (US 5095963) or Lagnier 126 (US 4994126).**

As to claim 14, it would have been obvious to one of ordinary skill in the art to branch the well known three dimensional sipe as claimed in view of the suggestion from either Maitre or Lagnier 126 to branch the radially inner portion of a sipe to improve wear resistance.

#### Remarks

10) Applicant's arguments with respect to claims 1, 4-16 and 18-20 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 9-19-05 have been fully considered but they are not persuasive.

Applicant's arguments regarding Japan 925 are not persuasive since the alternating square indentations on one side of the figure 14 blade form recesses and the alternating square indentations on the other side from protrusions wherein the projections and recesses are formed by a common portion of the middle layer of the three layer mold blade.

The 102 rejection over Japan 105 has been withdrawn in view of applicant's arguments fled 9-19-05 and in view of the following: During a partial oral translation of Japan 105 by a PTO translator, the following information was obtained: "In the embodiment of the above section 2, the shape of the convex part and concave part is exemplified as a spherical shape, but this may also be closer to a hemispherical shape, closer to a conical shape, or triangular cone shape or a quadrangular cone shape.

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Figure 3(b) shows an example of this quadrangular cone shape (the manner of expression is the same as that of figure 2(a))." Since Japan 105 describes "quadrangular cone shape", Japan 105 fails to anticipate the limitation of a planar vertex.

Europe 1243390 is cited of interest.

11) No claim is allowed.

12) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki  
November 28, 2005

  
**STEVEN D. MAKI** 11-28-05  
**PRIMARY EXAMINER**